JOURNAL OF APPLIED BEHAVIOR ANALYSIS 2000, **33,** 243–246 NUMBER 2 (SUMMER 2000)

EFFECTS OF ESCAPE TO ALONE VERSUS ESCAPE TO ENRICHED ENVIRONMENTS ON ADAPTIVE AND ABERRANT BEHAVIOR

ZBIGNIEW GOLONKA, DAVID WACKER, WENDY BERG, K. MARK DERBY, JAY HARDING, AND STEPHANIE PECK

THE UNIVERSITY OF IOWA

Escape-maintained aberrant behavior may be influenced by two outcomes: (a) a break from the activity and (b) subsequent access to preferred activities. To assess this hypothesis, a treatment was developed that analyzed response allocation across two break options: break alone and break with access to preferred social activities. The break with preferred activities decreased aberrant behavior and increased appropriate behavior.

DESCRIPTORS: escape extinction, appropriate behavior, choice making

Several treatment options are available for escape-maintained aberrant behavior, including escape extinction, reinforcement of alternative behavior, and contingent access to preferred activities for appropriate behavior (Carr & Newsom, 1985; Piazza, Moes, & Fisher, 1996). In practice, most treatments include both reductive and negative reinforcement procedures. For example, Carr and Newsom treated 3 clients whose tantrums were maintained by negative reinforcement. In the treatment conditions, each time a participant made a correct response, it was reinforced with breaks combined with a preferred item. When an increase in appropriate behavior was observed, it was concluded that the aversiveness of the demands was reduced by the introduction of positive reinforcement. Similarly, Piazza et al. demonstrated a reduction of escape-maintained destructive behavior and an increase in appropriate behavior for a child with autism. The intervention package included differential reinforcement of appropriate behavior, escape extinction without physical guidance, and demanding fading. As in the Carr and Newsom study, task completion resulted in access to highly preferred items such as social attention and tangible items.

In the present analysis, we hypothesized that although aberrant behavior was escape maintained, treatment might be more successful if access to a desired activity was made contingent upon reductions in aberrant behavior and increases in appropriate behavior via choice making. We based this hypothesis on the supposition that aberrant behavior maintained by negative reinforcement can occasion two outcomes: (a) a break from the task and (b) engagement in a desired activity. We tested this hypothesis by assessing the participants' preferences for two contingent outcomes within a choice-making paradigm: (a) a break alone and (b) a break enriched with concurrent access to social attention and preferred activities.

METHOD

Participants and Setting

Two individuals, aged 12 and 30 years, participated in the study. Liz was evaluated during a single 90-min outpatient visit, and Lucy was evaluated in an outpatient clinic and on

Zbigniew Golonka is now at Southbury Training School, Southbury, Connecticut, K. Mark Derby is now at Gonzaga University, Spokane, Washington, and Stephanie Peck is now at Utah State University, Logan, Utah. Special thanks are extended to Agnes DeRaad for her editorial assistance.

Address correspondence to Zbigniew Golonka, Crawford Hall, Southbury Training School, P.O. Box 872, Southbury, Connecticut 06488.

an inpatient unit. Prior assessments indicated that aberrant behavior was maintained by negative reinforcement for both participants.

The study was conducted in a classroom divided into three separate sections. One section of the classroom was a work area equipped with a table and chairs. The rest of the classroom was equally divided by a room partition that was approximately 165 cm long and 300 cm wide. On one side of the divider was a quiet area and on the other side was a social break area. The quiet area contained a small table with one chair, but no toys or other play activities were present. The social area was equipped with a table, chair, couch, TV, and radio, and the clients had access to therapists and family members.

Response Definition and Interobserver Agreement

Appropriate behavior was defined as a participant completing task demands without physical guidance. Topographies of aberrant behaviors were defined individually and included kicking and hitting others (Liz) and head hitting, hand biting, and screaming (Lucy). Time on earned break was scored when a break was received during a choice-making opportunity after the participant had completed a task and displayed the mand for a break. All behaviors were recorded using a 6-s partial-interval recording system. Interobserver agreement was computed by dividing the number of occurrence agreements by the number of occurrence agreements plus disagreements and multiplying by 100%. Interobserver occurrence agreement for the participants' behavior ranged from 75% to 100% across sessions, and average agreement was 86.5%.

General Procedure and Design

Treatment comparisons were carried out across two phases. During Phase 1, both participants were exposed to two conditions: a break alone or a break enriched with access to social and leisure activities. During both conditions, the participant was required to perform a demanding task. In each session, choice-making opportunities were provided during which the participant could choose to work or to have a break. In break-alone conditions, the participant sat at a table in the work area of the classroom. The therapist started the session by introducing a work task using a three-step prompt. If the participant was compliant with the verbal or gestural prompt, she was prompted to request a break. After exhibiting the "break" mand, the therapist removed all task demands and allowed the participant to go to the quiet area where she was told to sit on a chair. The participant was allowed to remain in the quiet break area for up to 24 s. Following the end of the break, the therapist asked the client if she wanted to stay on break or go back to work. If the mand was not exhibited, the participant returned to work. If the participant exhibited aberrant behavior, the demanding task was continued or the break period was terminated. In the enriched break with access to preferred social activities, the task was presented as above. However, if the participant exhibited the targeted mand, she was allowed to take a break in the social area of the room. During the break, a therapist interacted with the participant and preferred activities were available.

During Phase 2, the choice-making opportunity was extended to include three choice options. If the participant displayed appropriate behavior and exhibited the targeted mand, she was given a choice of (a) staying at the work task, (b) taking a break alone, or (c) taking a break with preferred activities. After the participant made a choice, she was allowed to remain in the chosen activity for up to 24 s.

RESULTS AND DISCUSSION

The results for Liz are presented in the top panel of Figure 1. For Liz, aberrant be-

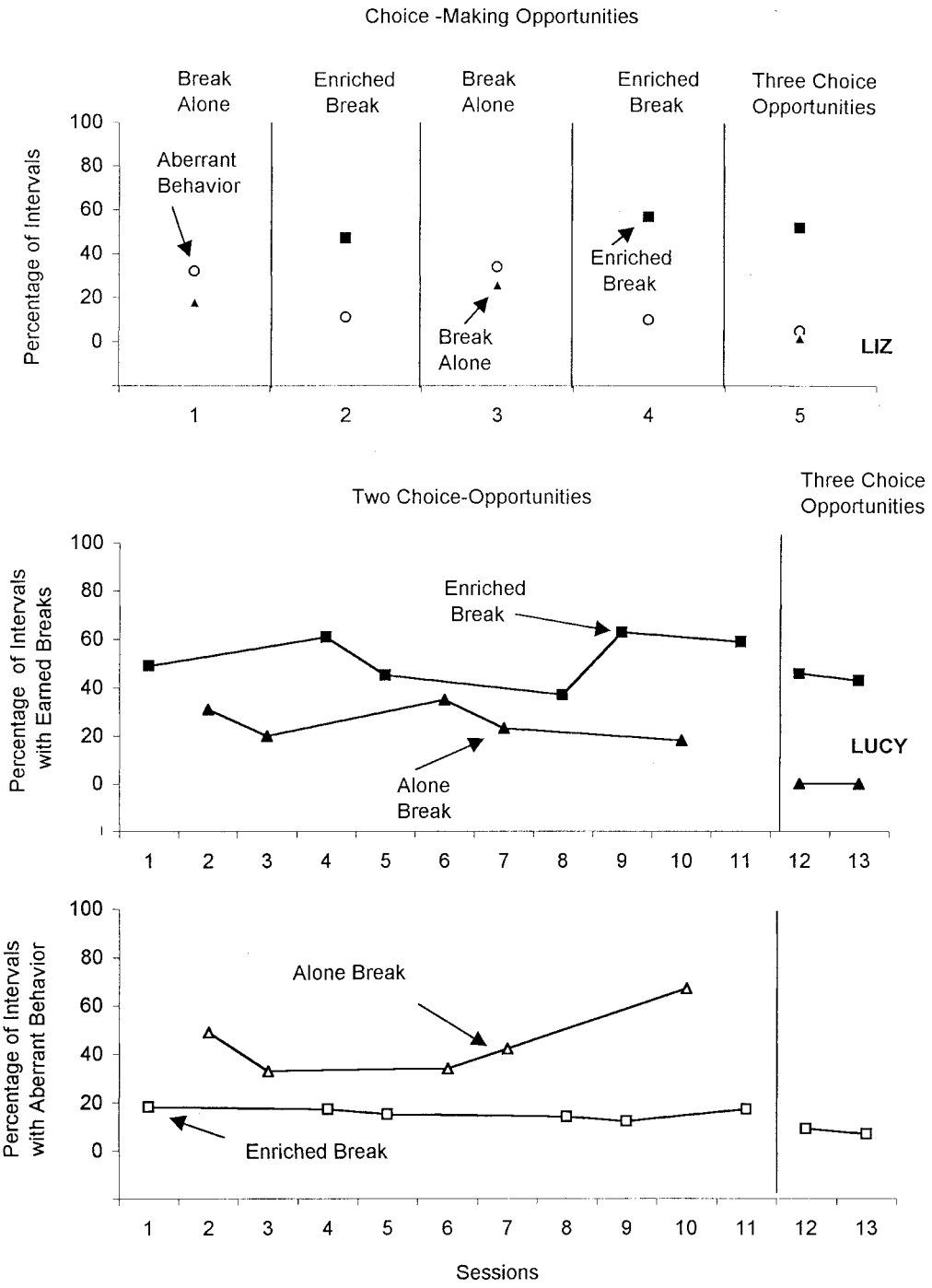

Figure 1. Results for Liz (top panel) show the percentage of 6-s intervals with aberrant behavior and earned breaks across the experimental conditions. Results for Lucy show the percentage of intervals with earned breaks (middle panel) and aberrant behavior (lower panel) across the experimental conditions.

havior occurred during 32% and 36% of intervals when she was provided with the choice-making opportunity of continuing to work or to take a break alone. Conversely, aggression occurred less often when she was provided with the choice of continuing to work or to take an enriched break with access to social activities (11% and 10% of the intervals, respectively). The lowest percentage of aggression occurred when she was provided with the option of staying at the work table, going to the quiet area, or going to the social area. When given a choice to work or to take a break only, she earned the break during 18% and 26% of the intervals across the two sessions. In comparison, she earned the enriched break with preferred social activities during 47% and 57% of the intervals across the two sessions, and continued to request the enriched break during the three choice options condition.

The results for Lucy are also shown in Figure 1. Lucy earned enriched breaks more often (an average of 52% of intervals, a range of 37% to 63% of intervals) than breaks alone (an average of 25% intervals, a range of 18% to 35% of intervals). In addition, she continued to engage in aberrant behavior when breaks alone were provided (an average of 45% of intervals, a range of 32% to 67% of intervals). Conversely, aberrant behaviors were observed in the enriched break conditions on an average of only 12% of intervals (a range of 7% to 18% of intervals).

The investigation showed that access to preferred activities and the type of breaks provided affected the participants' choice making and increased their appropriate behavior. They manded more often and spent more time in enriched breaks. Thus, providing enriched breaks for individuals whose aberrant behavior is escape motivated could have a positive effect on behavior. On a practical level, the investigation examined a treatment package that was useful in decreasing undesirable behavior. The methodology of combining escape extinction with access to enriched breaks via choice-making opportunities presents a potentially valuable treatment option.

REFERENCES

Carr, E. G., & Newsom, C. (1985). Demand-related tantrums. *Behavior Modification, 9,* 403–426.

Piazza, C. C., Moes, D., & Fisher, W. W. (1996). Differential reinforcement of alternative behavior and demand fading in the treatment of escape-maintained destructive behavior. *Journal of Applied Behavior Analysis, 29,* 569–572.

Received November 16, 1998
Final acceptance February 22, 2000
Action Editor, Mark O'Reilly